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EXAMINER				
LEE, ANDREW CHUNG CHEUNG				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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### Office Action Summary

**Application No.**

09/747,296

**Applicant(s)**

LAVIAN ET AL.

**Examiner**

Andrew C. Lee

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 November 2012.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 5) ☒ Claim(s) 1-24 is/are pending in the application.
- 5a) Of the above claim(s) 2,4 and 8 is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1,3,5-7,9-24 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

**Application Papers**

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.

- 3) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 2, 4, 8 have been cancelled.
2. Claims 1, 10, 13, 20 have been amended.
3. Claims 1, 3, 5 – 7, 9 – 24 are pending.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 3, 5 – 7, 9 – 15, 17, 19 – 24** rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman et al. (U.S. 6094435) and Ambe et al. (US 7009968 B2) in view of Kadambi et al. (US 6707817 B1).

**Regarding Claim 1**, Hoffman et al. disclose a packet forwarding device ("multilayer network element" interpreted as a packet forwarding device; Fig. 1, Fig. 2, element 12, col. 8, lines 55 – 60) comprising: monitoring types of packet traffic received in the packet forwarding device ("keeps track of the addresses of the end stations that transmit a packet showing up on one of ports" interpreted as monitoring types of packet traffic received; Fig. 1, col. 7, lines 6 – 10, "address independent classes" interpreted as types of packets; col.13, lines 14 – 29); and determine whether a type of packet traffic received in the packet forward device

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is a unicast type or a multicast type (unicast, multicast, single port, ports, Abstract, Col. 7, lines 49 – 67, Col. 8, lines 1 – 3; Fig. 7, Col. 18, lines 11 – 48). Hoffman et al. disclose implicitly when the type of packet traffic is unicast type, ("in a unicast route, the incoming packet would have had its destination address"; col. 17, lines 5 – 9), selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic ("whether any priority should be associated with the packet ", "the number of output ports that the packet will be output, the priority of the packet,..."; col. 15, lines 57 – 65, col. 17, lines 5 – 9, col. 18, lines 11 – 24); and, Hoffman et al. also disclose implicitly when the type of traffic is multicast type ("the entry may indicate whether the packet is part of a multicast routing" interpreted as the type of traffic is multicast type; col.16, lines 64 – 65), selectively modifying a priority queue associated with the traffic in response to a source parameter of the packet traffic ("whether any priority should be associated with the packet "; col. 15, lines 57 – 67, col. 16, lines 1 - 2, lines 61 – 67, col. 17, lines 1 – 2, 15 – 31, col. 18, lines 35 – 48), Hoffman et al. further disclose wherein the step of selectively modifying the priority queue associated with the packet traffic includes performing at least one of changing assignment of the packet traffic from a queue having a first priority to a queue having a second priority ("generates the queue selection" interpreted as to changing assignment of the predetermined type of packet traffic from a queue , Q1 low priority queue as best effort queue (second priority) and Q3 as high priority queue (first priority); Fig. 8, col. 19, 63 – 67, col. 20, lines 1 – 23), dropping packets of the packet traffic ("the queue Qi having the lowest priority,

overflows, then the packets are discarded" correlates to dropping packets of the packet traffic, col. 22, lines 46 – 50, 56 – 63), copying packets of the packet traffic, and diverting packets of the predetermined type in the packet traffic (col. 18, lines 41 – 48).

Hoffman et al. do not disclose explicitly when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic; when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port of the packet.

Ambe et al. in the same field of endeavor teach when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic ("unicast packet", col. 3, lines 29 – 51, "changing the 802.1p priority in the packet Tag header....."; col. 9, lines 13 – 23, lines 26 – 36, col. 13, lines 16 – 31, Fig. 8); when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port of the packet traffic ("multicast packet"; col. 3, lines 29 – 51, "changing the 802.1p priority in the packet Tag header....."; col. 9, lines 13 – 23, lines 26 – 36, col. 13,

lines 16 – 31, Fig. 18). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Hoffman et al. to include the features of when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic; when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of the packet as taught by Ambe et al. One of ordinary skill in the art would be motivated to do so for providing a switch-on-chip solution for a network switch, capable of using ethernet, fast ethernet, and gigabit ethernet systems, wherein all of the switching hardware is disposed on a single microchip (as suggested by Ambe et al., see col. 2, lines 44 – 49). Ambe et al. disclose implicitly a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic (Col. 19, lines 1 – 28), a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (Col. 9, lines 11 – 39). Ambe et al. do not disclose explicitly a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port.

Kadambi et al. in the same field of endeavor teach a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress

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port (VLAN ID source and destination, ingress port, egress port , IP address; Col. 22, lines 51, Fig 8; Col. 33, lines 1 – 30, Fig. 22; Col. 39, lines 16 – 26). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Hoffman et al. and Ambe et al to include the features of a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (VLAN ID source and destination, ingress port, egress port , IP address as taught by Kadambi et al. One of ordinary skill in the art would be motivated to do so for providing the invention relates to a new switching architecture in an integrated, modular, single chip solution, which can be implemented on a semiconductor substrate such as a silicon chip (as suggested by Kadambi et al., see Col. 1, lines 22 – 26)

**Regarding Claims 3, 23,** Hoffman et al. disclose the method claimed wherein sources parameter includes a source MAC address (“an entry for the layer 2 source transmitting the packets” and “the values of the MAC address of the source” interpreted as sources parameter including a source MAC address; col. 11, lines 19 – 25, lines 44 – 47).

**Regarding Claims 5, 21,** Hoffman et al. disclose the method claimed wherein packet traffic is associated with its ingress port (“the input port has buffered at least the first 64 bytes of the received packet” interpreted as packet traffic is associated with its ingress port; Fig. 3, col. 9, lines 15 – 26).

**Regarding Claims 6 and 22**, Hoffman et al. disclose packet traffic is based on its destination (“an entry indicating the port of the destination address” correlates to packet traffic is based on its destination; col. 11, lines 39 – 41).

**Regarding Claim 7**, Hoffman et al. disclose the limitation of the method of claimed wherein the destination parameter includes a destination MAC address (“output port need not make any modifications to the header except for inserting its MAC address” interpreted as destination of packet includes a destination MAC address; col. 15, lines 65 – 67).

**Regarding Claim 9**, Hoffman et al. disclose the method claimed wherein the type of packet traffic is associated with its egress port (“the input port then passes information about where the packet is stored to the appropriate output port” correlates to packet traffic is associated with its egress port; col. 10, lines 18 – 31).

**Regarding Claim 10**, Hoffman et al. disclose the method claimed wherein the type of traffic is based on its protocol, and including selectively modifying the priority of the traffic in response to its protocol (“ARP, RSVP” interpreted as the type of traffic is based on its protocol; Col. 13, lines 14 – 29; “whether any priority should be associated with the packet”; Col. 15, lines 57 – 67, Col. 16, lines 1 - 2, lines 61 – 67, Col. 17, lines 1 – 2, 15 – 31, Col. 18, lines 35 – 48).

**Regarding Claim 11**, Hoffman et al. disclose a packet forwarding device (“multilayer network element” interpreted as a packet forwarding device; Fig.1, Fig. 2, element 12, col. 8, lines 55 – 60). Hoffman et al. and Ambe et al. do not disclose explicitly the protocol of traffic includes FTP.



Kadambi et al. in the same field of endeavor teach the protocol of traffic includes FTP (Application type FTP; Col. 39 lines 16 - 67). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Hoffman et al. and Ambe et al to include the features of the protocol of traffic includes FTP as taught by Kadambi et al. One of ordinary skill in the art would be motivated to do so for providing the invention relates to a new switching architecture in an integrated, modular, single chip solution, which can be implemented on a semiconductor substrate such as a silicon chip (as suggested by Kadambi et al., see Col. 1, lines 22 – 26)

**Regarding Claim 12**, Hoffman et al. disclose the method claimed wherein the protocol of traffic includes HTTP ("http" interpreted as the protocol of traffic includes HTTP; Col. 13, lines 62 – 65).

Regarding **claim 13**, Hoffman et al. disclose a packet forwarding device ("multilayer network element" interpreted as a packet forwarding device; Fig.1, Fig. 2, element 12, col. 8, lines 55 – 60) method comprising: monitoring environmental conditions of reception of packet traffic in the packet forwarding device ("keeps track of the addresses of the end stations that transmit a packet showing up on one of ports" interpreted as monitoring environmental conditions of reception of packet traffic; Fig. 1, col. 7, lines 6 – 10, "address independent classes" interpreted as types of packets; col.13, lines 14 – 29); determining whether environmental conditions associated with reception of packet traffic in the packet forwarding device meet predetermined criteria ("depending on the configuration of the network or the particular protocol in use....adding a class

identifier allows the switching element to respond to varying network situations" interpreted as determining whether environmental conditions of reception of packet traffic in the packet forwarding device meet predetermined criteria; col. 13, lines 2 – 19), and when the environmental conditions meet the predetermined criteria ("when the conditions for transmission are met" is interpreted as when the environmental conditions of reception of packet traffic meet the predetermined criteria; col. 10, line 28), determine whether a type of packet traffic received in the packet forward device is a unicast type or a multicast type (unicast, multicast, single port, ports, Abstract, Col. 7, lines 49 – 67, Col. 8, lines 1 – 3; Fig. 7, Col. 18, lines 11 – 48).

Hoffman et al. disclose implicitly when the type of packet traffic is unicast type, ("in a unicast route, the incoming packet would have had its destination address"; col. 17, lines 5 – 9), selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic ("whether any priority should be associated with the packet ", "the number of output ports that the packet will be output, the priority of the packet,..."; col. 15, lines 57 – 65, col. 17, lines 5 – 9, col. 18, lines 11 – 24); and, Hoffman et al. also disclose implicitly when the type of traffic is multicast type ("the entry may indicate whether the packet is part of a multicast routing" interpreted as the type of traffic is multicast type; col.16, lines 64 – 65), selectively modifying a priority queue associated with the traffic in response to a source parameter of the packet traffic ("whether any priority should be associated with the packet "; col. 15, lines 57 – 67, col. 16, lines 1 - 2, lines 61 – 67, col. 17, lines 1 – 2, 15 – 31, col. 18,

lines 35 – 48), Hoffman et al. further disclose wherein modifying includes automatically performing at least one of changing assignment of the packet traffic from a queue having a first priority to a queue having a second priority ("generates the queue selection" interpreted as to changing assignment of the predetermined type of packet traffic from a queue, Q1 low priority queue as best effort queue (second priority) and Q3 as high priority queue (first priority); Fig. 8, col. 19, 63 – 67, col. 20, lines 1 – 23), dropping packets of the packet traffic ("the queue Qi having the lowest priority, overflows, then the packets are discarded" correlates to dropping packets of the packet traffic, col. 22, lines 46 – 50, 56 – 63), copying packets of the packet traffic, and diverting packets of the predetermined type in the packet traffic (col. 18, lines 41 – 48).

Hoffman et al. do not disclose explicitly when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic; when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port of the packet.

Ambe et al. in the same field of endeavor teach when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic ("unicast packet", col. 3, lines 29 – 51, "changing the 802.1p priority in the packet Tag

header....."; col. 9, lines 13 – 23, lines 26 – 36, col. 13, lines 16 – 31, Fig. 8); when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of the packet traffic ("multicast packet"; col. 3, lines 29 – 51, "changing the 802.1p priority in the packet Tag header....."; col. 9, lines 13 – 23, lines 26 – 36, col. 13, lines 16 – 31, Fig. 18). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Hoffman et al. to include the features of when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic; when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of the packet as taught by Ambe et al. One of ordinary skill in the art would be motivated to do so for providing a switch-on-chip solution for a network switch, capable of using ethernet, fast ethernet, and gigabit ethernet systems, wherein all of the switching hardware is disposed on a single microchip (as suggested by Ambe et al., see col. 2, lines 44 – 49). Ambe et al. disclose implicitly a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic (Col. 19, lines 1 – 28), a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (Col. 9, lines 11 – 39). Ambe et al. do not disclose explicitly a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet

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traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port.

Kadambi et al. in the same field of endeavor teach a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (VLAN ID source and destination, ingress port, egress port, IP address; Col. 22, lines 51, Fig 8; Col. 33, lines 1 – 30, Fig. 22; Col. 39, lines 16 – 26). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Hoffman et al. and Ambe et al to include the features of a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (VLAN ID source and destination, ingress port, egress port, IP address as taught by Kadambi et al. One of ordinary skill in the art would be motivated to do so for providing the invention relates to a new switching architecture in an integrated, modular, single chip solution, which can be implemented on a semiconductor substrate such as a silicon chip (as suggested by Kadambi et al., see Col. 1, lines 22 – 26)

**Regarding Claim 14**, Hoffman et al. disclose the method claimed wherein the environmental conditions meeting the predetermined criteria include time of day (“monitored one at a time” and “the scheme detects misbehavior of flows

over a period of time" interpreted as environmental conditions meeting the predetermined criteria include time of day; col. 22, lines 8 – 16).

**Regarding Claim 15**, Hoffman et al. disclose the environmental conditions meeting the predetermined criteria including network configuration changes ("depending on the configuration of the network" and "allows the switching element to responds to varying network situation" interpreted as the environmental conditions meeting the predetermined criteria including network configuration changes; col. 13, lines 11 –19).

**Regarding claim 17**, Hoffman et al. disclose the method claimed wherein the network configuration changes include network congestion ("congestion may occur in the network element" interpreted as network configuration changes include network congestion; col. 21, lines 37 – 41).

**Regarding Claim 19**, Hoffman et al. disclose the environmental conditions meeting the predetermined criteria including line use of high level protocols ( "address independent classes" interpreted as environmental conditions meeting the predetermined criteria; "ARP, RSVP" or "http" as high level protocols; col. 13, lines 14 – 29, lines 62 – 65).

**Regarding Claim 20**, Hoffman et al. disclose a packet forwarding device ("multilayer network element" interpreted as a packet forwarding device; Fig.1, Fig. 2, element 12, col. 8, lines 55 – 60) comprising: monitoring types of packet traffic received in the packet forwarding device ("keeps track of the addresses of the end stations that transmit a packet showing up on one of ports" interpreted as monitoring types of packet traffic received; Fig. 1, Col. 7, lines 6 – 10, " address

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independent classes" interpreted as types of packets; col.13, lines 14 – 29); When the traffic patterns of packet traffic meet the predetermined criteria, determining whether a type of packet traffic received in the packet forward device is a unicast type or a multicast type ("depending on the configuration of the network or the particular protocol in use....adding a class identifier allows the switching element to respond to varying network situations"; Col. 13, lines 2 – 19; unicast, multicast, single port, ports, Abstract, Col. 7, lines 49 – 67, Col. 8, lines 1 – 3; Fig. 7, Col. 18, lines 11 – 48).

Hoffman et al. disclose implicitly when the type of packet traffic is unicast type, ("in a unicast route, the incoming packet would have had its destination address"; col. 17, lines 5 – 9), selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic ("whether any priority should be associated with the packet ", "the number of output ports that the packet will be output, the priority of the packet,..."; col. 15, lines 57 – 65, col. 17, lines 5 – 9, col. 18, lines 11 – 24); and, Hoffman et al. also disclose implicitly when the type of traffic is multicast type ("the entry may indicate whether the packet is part of a multicast routing" interpreted as the type of traffic is multicast type; col.16, lines 64 – 65), selectively modifying a priority queue associated with the traffic in response to a source parameter of the packet traffic ("whether any priority should be associated with the packet "; col. 15, lines 57 – 67, col. 16, lines 1 – 2, lines 61 – 67, col. 17, lines 1 – 2, 15 – 31, col. 18, lines 35 – 48), Hoffman et al. further disclose wherein modifying includes automatically performing at least one of changing assignment of the packet traffic

from a queue having a first priority to a queue having a second priority ("generates the queue selection" interpreted as to changing assignment of the predetermined type of packet traffic from a queue, Q1 low priority queue as best effort queue (second priority) and Q3 as high priority queue (first priority); Fig. 8, col. 19, 63 – 67, col. 20, lines 1 – 23), dropping packets of the packet traffic ("the queue Qi having the lowest priority, overflows, then the packets are discarded" correlates to dropping packets of the packet traffic, col. 22, lines 46 – 50, 56 – 63), copying packets of the packet traffic, and diverting packets of the predetermined type in the packet traffic (col. 18, lines 41 – 48).

Hoffman et al. do not disclose explicitly when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic; when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port of the packet.

Ambe et al. in the same field of endeavor teach when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic ("unicast packet", col. 3, lines 29 – 51, "changing the 802.1p priority in the packet Tag header....."; col. 9, lines 13 – 23, lines 26 – 36, col. 13, lines 16 – 31, Fig. 8); when the type of traffic is multicast type, selectively modifying a priority queue



associated with the traffic in response to a source parameter of the packet traffic ("multicast packet"; col. 3, lines 29 – 51, "changing the 802.1p priority in the packet Tag header....."; col. 9, lines 13 – 23, lines 26 – 36, col. 13, lines 16 – 31, Fig. 18). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Hoffman et al. to include the features of when the type of packet traffic is unicast type, selectively modifying a priority queue associated with the traffic in response to a destination parameter of the packet traffic; when the type of traffic is multicast type, selectively modifying a priority queue associated with the traffic in response to a source parameter of the packet as taught by Ambe et al. One of ordinary skill in the art would be motivated to do so for providing a switch-on-chip solution for a network switch, capable of using ethernet, fast ethernet, and gigabit ethernet systems, wherein all of the switching hardware is disposed on a single microchip (as suggested by Ambe et al., see col. 2, lines 44 – 49). Ambe et al. disclose implicitly a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic (Col. 19, lines 1 – 28), a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (Col. 9, lines 11 – 39). Ambe et al. do not disclose explicitly a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port.

Kadambi et al. in the same field of endeavor teach a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (VLAN ID source and destination, ingress port, egress port, IP address; Col. 22, lines 51, Fig 8; Col. 33, lines 1 – 30, Fig. 22; Col. 39, lines 16 – 26). At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Hoffman et al. and Ambe et al to include the features of a destination parameter of a plurality of destination parameters including IP address, destination VLAN and egress port of the packet traffic, and a source parameter of a plurality of source parameters including IP address, source VLAN and ingress port (VLAN ID source and destination, ingress port, egress port, IP address as taught by Kadambi et al. One of ordinary skill in the art would be motivated to do so for providing the invention relates to a new switching architecture in an integrated, modular, single chip solution, which can be implemented on a semiconductor substrate such as a silicon chip (as suggested by Kadambi et al., see Col. 1, lines 22 – 26)

**Regarding Claim 24**, Hoffman et al. disclose the method claimed wherein at least some of the traffic patterns are based on specified IP flows (“when the class indicates that the packet is of a class hardware routable IP” correlates to the traffic patterns are based on specified IP flows; col. 13, lines 20 – 29; col. 14, lines 29 – 31).

6. **Claims 16, 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman et al. (U.S. 6094435) and Ambe et al. (US 7009968 B2) and Kadambi et al. (US 6707817 B1) as applied to claims 13,15 above, and further in view of Bowman-Amuah (US 6611867 B1).

**Regarding Claim 16**, Hoffman et al. disclose a packet forwarding device ("multilayer network element" interpreted as a packet forwarding device; Fig.1, Fig. 2, element 12, col. 8, lines 55 – 60). Hoffman et al. also teach network configuration changes ("depending on the configuration of the network" and "allows the switching element to responds to varying network situation" interpreted as the environmental conditions meeting the predetermined criteria including network configuration changes; col. 13, lines 11 –19).

Hoffman et al. and Ambe et al. and Kadambi et al. do not disclose explicitly the method claimed the network configuration changes including network failures.

Bowman-Amuah in the same field of endeavor teaches the method claimed herein the network configuration changes including network failures ("if non-service affecting network failure occurs" interpreted as network configuration changes including network failures; Fig. 35, col. 77, lines 45 – 52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Hoffman et al. and Ambe et al. and Kadambi et al. to include the features of claimed herein the network configuration changes including network failures as taught by Bowman-Amuah in order to provide a network management layer may handle the failure without

notifying the Service management Layer (SML) (as suggested by Bowman-Amuah, see col.77, lines 50 – 52).

**Regarding Claim 18**, Hoffman et al. disclose a packet forwarding device ( “multilayer network element” interpreted as a packet forwarding device; Fig.1, Fig. 2, element 12, col. 8, lines 55 – 60). Hoffman et al. also teach network configuration changes (“depending on the configuration of the network” and “allows the switching element to responds to varying network situation” interpreted as the environmental conditions meeting the predetermined criteria including network configuration changes; col. 13, lines 11 –19).

Hoffman et al. and Ambe et al. and Kadambi et al. do not disclose explicitly the method of claimed wherein the network configuration changes including network error rates.

Bowman-Amuah in the same field of endeavor teaches claimed wherein the network configuration changes including network error rates (“a poor error rate at these speeds” interpreted as including network error rates; col. 48, lines 36 – 44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Hoffman et al. and Ambe et al. and Kadambi et al. to include the method of claimed wherein the network configuration changes including network error rates such as that taught by Bowman-Amuah in order to provide a hybrid network be provisioned in accordance with the network problems and service requests (as suggested by Bowman-Amuah, see col. 2, lines 17 – 19).

***Response to Arguments***

7. Applicant's arguments filed 11/01/2012 with respect to claims 1, 3, 5 – 7, 9 – 24 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kadambi et al. (US 6850521 B1).
- Wilford et al. (6687247 B1).
- Ahearn et al. (5926463).

9. In case of the claims/claimed subject matters are modified/amended, Applicant(s) is/are respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify as well as to ascertain the metes and bounds of the claims/claimed subject matters.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571)272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Lai can be reached on (571) 272-9741. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/ Examiner, Art Unit 2411 <2Q13:03_06_13>	/Andrew Lai/ Supervisory Patent Examiner, Art Unit 2411
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